

Case Study: Bergen's Promise Automated Onboarding & Compliance

Client & Context

Bergen's Promise is a nonprofit dedicated to supporting vulnerable populations. Their manual onboarding process for new volunteers and staff was time-consuming, error-prone, and struggled to meet strict government compliance mandates.

Objectives & Challenges

- Automate repetitive onboarding tasks to reduce manual effort.
- Ensure 100% compliance with government identity and security policies.
- Reduce onboarding time from days to hours without errors.
- Provide a user-friendly interface for administrators to track progress.

Tech Stack & Architecture

Automation Scripting: Python 3.10 + PowerShell 7 for cross-platform task automation
Browser Automation: Selenium WebDriver (Chrome) for form population
Frontend Dashboard: React.js v18 with Context API and Tailwind CSS
Identity & Access: Google Workspace Admin SDK, Active Directory PowerShell modules, Duo Security API
CI/CD: GitHub Actions for automated testing and deployment of scripts and dashboard

Implementation Highlights

1. **Python & PowerShell Pipelines**: Created modular scripts—Python handled CSV parsing and business logic; PowerShell executed on-prem AD provisioning.
2. **Selenium Automation**: Automated web form submissions to external compliance portals with robust error handling and retry logic.
3. **Admin Dashboard**: Built a React SPA with real-time status updates via REST endpoints hosted on AWS Lambda.
4. **Identity Provisioning**: Integrated with Google Admin SDK and Active Directory to auto-create user accounts and assign security groups.
5. **Duo Security Enrollment**: Leveraged Duo's API in a Cloud Function to enroll devices and enforce MFA configuration.

Outcomes & Impact

- **91% Time Reduction**: Cut onboarding duration from ~4 business days to under 4 hours.
- **100% Compliance**: Automated all mandatory checks for government audits.
- **0 Manual Errors**: Validation and rollback logic eliminated data-entry mistakes.
- **200+ Users Onboarded**: Scaled to support volunteers, staff, and partner organizations.

Key Takeaways

Combining Python, PowerShell, and Selenium with modern React tooling streamlined operations, ensured compliance, and dramatically improved efficiency for Bergen's Promise.